



# NEWSLINE

Published weekly for employees of Lawrence Livermore National Laboratory

Friday, January 16, 2004

Vol. 29, No. 2

## Lab reaps benefits of invention

By Charles Osolin

NEWSLINE STAFF WRITER

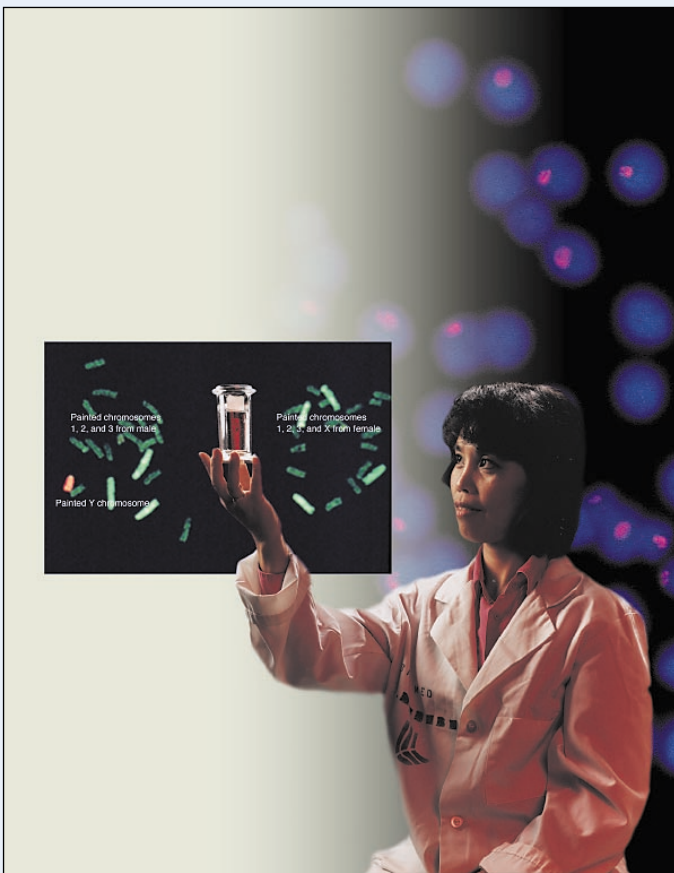
In his first all-hands meeting with Lawrence Livermore employees in November, University of California President Robert Dynes acknowledged his “profound awe” of the Lab’s “entrepreneurial spirit.”

The practical benefits of that spirit were much in evidence last year, as the Lab’s annual royalty income from its hundreds of patents and copyrighted software topped \$4 million for the first time.

Livermore traditionally has been the leader in licensing and royalty income among the Department of Energy’s national laboratories. From 1992 through 2003, LLNL patents and copyrighted software generated more than \$25 million in licensing income – the most in the DOE system.

Licensing income is derived from up-front fees and royalties on the sale of

See **INCOME**, page 7



S&TR

Livermore developed a way to “paint” specific chromosomes. With this technique, scientists can quickly identify chromosome aberrations. This photo is of one-day-old mouse embryos. The bright green chromosomes are chromosomes 1,2,3 and X. The orange one is chromosome Y.

## UC Board of Regents paves way for competition to manage national labs

The University of California Board of Regents on Thursday took action that would preserve the university’s option to compete for the contracts to manage three national laboratories.

While the board did not make a decision as to whether UC would compete to continue to manage the national laboratories, its action allows the university to continue to prepare as if it will participate. Action regarding whether UC will enter into the competition is expected to be made by the regents after the Department of Energy releases its request for proposals.

“The Regents’ action allows UC to take the necessary steps with the Department of Energy, including the extension of the laboratory contracts for up to two years, to ensure that the vital missions at each laboratory continue to be met,” said UC President Robert Dynes. “This action is about ensuring that the university is able to compete, and compete successfully, should the Regents make a decision to move forward with competition.”

The Regents’ action allows the UC president, with the concurrence of the chairman of the Board of Regents and the chairman of the Regents’ Committee on Oversight of the DOE Laboratories, to execute contract term extensions with DOE for continued management of

See **UC**, page 5



## Energy conservation effort earns transportation program two federal energy awards

Laboratory efforts to conserve energy by promoting commuter services such as bus, car and vanpools and encouraging use of bicycles on site have earned two federal energy awards.

LLNL’s Transportation Systems Management Program (TSMP) received the 2003 Federal Energy and Water Management Award from the DOE and the Federal Interagency Energy Policy Committee as well as DOE’s 2003 Departmental Energy Management Award.

In a letter to Mishell Pendleton, superintendent of fleet management, Energy Secretary Spencer Abraham said the Laboratory’s “excellent performance in supporting the Energy Management Program is an example for others to emulate.”

The secretary cited the Lab program’s suc-

See **AWARDS**, page 7

## ETEC opens doors



JACQUELINE MCBRIDE/NEWSLINE

From left to right: Linda Maguire of the Livermore School district, Stan Hitomi, director of the Edward Teller Education Center (ETEC), Marshall Kamena, Livermore Mayor, and Ron Cochran, Lab executive officer, cut a cake during a brief ceremony marking Edward Teller’s birthday and an open house displaying ETEC’s new facilities. Hitomi announced a new scholarship in Edward Teller’s name to be given to Livermore’s top high school science students.



**S&TR editor computes**

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**Looking to physics future**

— Page 5



**Vernal knowledge**

— Page 8





# LAB COMMUNITY NEWS

## Weekly Calendar

Technical Meeting Calendar, page 4

Friday  
**16**

The old Central Cafe, re-named the **Hard Hat Cafe**, will close today at 1:30 p.m. Java Wave will remain open with full service at the Hard Hat Cafe through Friday Jan. 23. Java Wave will start selling coffee beverages at 7 a.m. and pre-made sandwiches and salads from 11a.m. to 1 p.m. The new Central Cafe is scheduled to open Feb. 2.

Wednesday  
**21**

Today's session of the **Macintosh Technical Seminar Series** will feature a Macworld wrap up presentation by Apple Computer Sr. Systems Engineer Ron Ustach. Items to be covered will be Apple's new G5 Xserve and Xserve RAID, Xgrid, iLife 04- the creative application suite including iMovie, iDVD, iTunes, iPhoto, and the new GarageBand. For further information, contact Duane Straub, 2-9774, or [straub1@llnl.gov](mailto:straub1@llnl.gov).

...  
A **Fidelity retirement counselor** will be available on today and Thursday. Fidelity Mutual Funds are available to UC's workplace retirement plan participants in addition to the UC-managed investment pools. If you would like to set up a one-on-one consultation, call 800-642-7131. When calling be sure to specify that you are an LLNL employee.

Thursday  
**22**

**Karats Jewelry** will visit LLESA today from 11 a.m. until 3 p.m. in Bldg. 415, room 103. They offer jewelry products that are up to 60 percent below retail.



The **Asian Pacific American Council (APAC)** is asking for donations of old/used cell phones for their fundraising activity. The funds raised will go towards the APAC Scholarship Fund. Please donate your old/used cell phones (personal cell phones only, no government cell phones accepted) at two drop off points: Bldg. 694, room 1046 or Bldg. 151, room 1132, through Feb. 29. For more information, contact Barry Dahling, APAC Scholarship Committee chair, 4-4882 or Ricky Chau, APAC chair, 3-4388.

...  
**Alameda County Cattlewomen** are hosting a Valentine dinner and dance on Saturday, Feb. 14, at Veterans Hall in Livermore. The event includes a steak dinner, live music and dancing. For more information, 455-1262.

## Correction

Bernie Mattimore, deputy associate director for Plant Services in the Laboratory Services Directorate, has not retired as incorrectly reported on page 5 of the Friday, Jan. 9 "2003 Year in Review" edition of *Newsline*.

## RETIREE'S CORNER

**Sam Perone** (Chemistry & Materials Science, 1989) has just published his second novel. Entitled "Crisis on Flight 101," it is a sequel to "The StarSight Project" published last year, and is now posted on various Internet sites: [amazon.com](http://amazon.com), [barnesandnoble.com](http://barnesandnoble.com), and [booksamillion.com](http://booksamillion.com). The publisher is iUniverse, Inc. and the author is listed as S. P. Perone. The first book is a futuristic counter-terrorist adventure, with settings in the Livermore Valley and LLNL. The second book is a sci-fi psychological thriller that should appeal to anyone interested in time travel, early World War II history or vintage "flying boat" aircraft, all of which are featured in the book. Of course, many of the same characters from the "StarSight" story appear in the new book, along with some interesting new ones. The new book is a paperback, packaged with an attractive cover design and compact readable font. It is listed at \$17.95.

In addition to Internet marketing, both books are available at several local independent bookstores, notably Altamont Books in Livermore, and Odyssey Books and Booksellers in Grass Valley. There's a possibility of a book signing event at Altamont Books at some future date.

**Don Stiles** (Electronics Engineering, 1988) has been traveling to Portugal visiting Madeira (The Floating Garden Island), and Lisbon and Algarve, the southern part noted for its beautiful tiles. Then on to Costa del Sol in Spain and Alhambra to see the Moorish architecture and short trips

to Gibraltar and Morocco. He has just returned from a cruise from San Diego to Rio de Janeiro by way of Mexico, Costa Rica, Ecuador, Peru, Chile, Argentina, Falkland Islands, Uruguay and Brazil. He crossed the equator, cruised past glaciers, saw a lot of penguins and visited Ushuaia, Argentina, the southern-most city in the world. Since his retirement, he has visited 50 countries and looks forward to many more.

**The LLNL Retirees Travel Slide Group** starts again January through June on the fourth Tuesday at 2 p.m. in the Livermore Library meeting room. The Jan. 27 meeting is entitled "Welcoming the Millennium: Angkor Wat and Mayanmar (Burma)" by Arlene and Stephen Chin. The Feb. 24 meeting is: "Colonial Mexico: Not the Traditional Tourist Sites" by David and Barbara Edwards.

**The Retirees' Dinner/Dance** event will be held at the Springtown Club House, on Friday, Jan. 30. Appetizers will start at 6 p.m., dinner at 7 p.m. and dancing at 8 p.m. If you are a member of the Retirees' Network, you should have received the reservation form recently in the mail. If you are not yet a member, or if you prefer, you can make reservations online at [www.llnlretirees.org](http://www.llnlretirees.org). Reservations must be received no later than Jan. 23.

Please send any news or input to Jane or Gus Olson. E-mail [AugustO@aol.com](mailto:AugustO@aol.com) or [JaneRubert@aol.com](mailto:JaneRubert@aol.com), call 443-4349, or send mail to 493 Joyce Street, Livermore, Calif., 94550.

## IN MEMORIAM

### Donald Davis

Donald Theodore Davis, a 38-year Livermore resident, died Jan. 8. He was 63.

Davis was born March 9, 1940, in St. Paul, Minn. He moved to Livermore in 1965. He worked at the Laboratory in electronics for 38 years. Davis was a member of the Las Positas Men's Club and also served as the past president of the Laboratory's Golf Club.

He was very involved in 4-H and was the co-swine leader for 16 years. He was a member of IEEE, a passionate golfer and avid bridge player.

He is survived by his wife of 37 years, Darlene "Dee" Davis; his sons, Douglas Scot-Davis of Margarita, Duane Alexander Davis of Livermore and Drake Christopher Davis of Farmington, N.M.; his sisters Julia "Judy" LaBelle Davis of St. Paul, Minn., Diana Faye Trepp of Golden, Colo., and Sandra Larson of Shoreview, Mass; and his brother, Gary Allen Davis of St. Paul, Minn.

Services will be held at 10 a.m. Saturday (Jan. 17) at Callaghan Mortuary.

### Francis Stuart

Francis "Frank" Stuart, a retired mechanical engineer, died Jan 9. He was 79.

Stuart came to the Lab in 1960 and worked as a weapons engineer, retiring in the early 1980s. He had lived in Livermore most of his life until moving to Rio Vista three years.

Born in Missouri, Stuart earned his bachelor's degree from the University of Kansas. He served as a sergeant in the U.S. Army during World War II and landed on Omaha Beach during D-Day and eventually fought in the Battle of the Bulge. He earned a Bronze Star.

Stuart was a longtime member of the Eudora, Kan., Masonic Lodge and served as a deacon in the Baptist church since 1945. He was an avid duck and pheasant hunter and enjoyed tending to his hunting dogs.

Survivors include his wife of 60 years, Jean; his daughters, Marla and Mary Beth, sons-in-law Al and Dean; nine grandchildren and five great-great grandchildren.

Internment will be private. A memorial will be held at 10:30 a.m. Tuesday, Jan. 20 at Sonora Baptist Church. Contributions in his memory may be made to the Alzheimer's Foundation.

## Newsline

*Newsline* is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

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AROUND THE LAB



Comp’s Van Emden Henson named *S&TR* editor

By Bob Hirschfeld

NEWSLINE STAFF WRITER

The Lab has selected Van Emden Henson as the new editor of *Science and Technology Review* and he sees it as a chance to tout Laboratory projects and programs.

Henson takes over from Donn McMahon as scientific editor, while keeping his day job as group leader for the eleven-member Scalable Algorithms Group within the Center for Applied Scientific Computing (CASC).

In an office crammed with an eclectic collection, including a quartet of bobble-heads, the Complete Pelican Shakespeare, both a Mr. and a Mrs. Potato Head, and eight large color photos of his daughter Jennifer, Henson said he does not consider his one-year appointment to be a promotion but rather, an opportunity.

“It opens up possibilities to go everywhere and see everything around the Lab,” he said.

During his tenure, the magazine will emphasize LLNL’s academic collaborations, especially with the University of California, Henson said, as well as the Lab’s growing connections with the Department of Homeland Security.

There will also be a number of stories emphasizing computation. “That’s not because I’m from the Computation Directorate,” Henson said, “but because the time is right to tell a number of Comp stories.”

While these include the installation of several new supercomputers and the completion of the Terascale Simulation Facility, Henson emphasizes that the new hardware is only part of the story.

“We’ve seen enormous achievements resulting from computations in nearly every discipline and directorate, as well as from new algorithms created in Comp in conjunc-



JACQUELINE MCBRIDE/NEWSLINE

Van Emden Henson, who has been selected new editor of *Science and Technology Review*, stands in his office along with some of his office mates, a quartet of bobbleheads and Mr. and Mrs. Potato Head.

tion with Laboratory scientists,” he said.

There’s little in Henson’s background to suggest that he would eventually edit one of the nation’s most highly respected technology monthlies.

His interests while attending high school

in Clearfield, Utah, centered on drama and literature. In fact, his first paying job was as a dancer in “Hello Dolly!” and he spent several years as a director and designer of theatrical productions.

After majoring in geology and geophysics at the University of Utah, he went to work for Cities Service Oil and Gas, doing reflection seismology. That’s when his interest in scientific computing began. He wrote user-friendly software programs aiding the analysis of the data collected in the field.

After the oil business collapsed in the mid-’80s, he resumed his education, earning an M.S. and a Ph.D. in applied mathematics at the University of Colorado. He and his mathematician wife, Teri, both accepted faculty positions at the Naval Postgraduate School in Monterey.

In June 1996, the Lab offered Henson a full-time consulting job, and a year later, he moved into his current staff position. Now it looks like Henson will be at LLNL for the foreseeable future. With pride, he says, “I’m surrounded by brilliant people.”

Furthermore, he is delighted by the Lab’s lack of a strict dress code. Even in the middle of winter, Henson can usually be found wearing his trademark shorts. “I’m allergic to long pants,” he explained.

When he’s not wearing his new editor’s ‘hat,’ or working on complex algorithms at the Lab,

Henson can be found on the soccer field. He recently became president of the Livermore Referee Association, and spends most of his free time refereeing youth, high school and college soccer games.

Willie Brown to speak at Martin Luther King celebration next week

Former San Francisco Mayor Willie Brown will be the keynote speaker at the Laboratory’s celebration of the life of Martin Luther King from 1:15 - 3 p.m. Wednesday, Jan. 21, in the Bldg. 123 auditorium.

Brown will discuss “40 years Later: Keeping the Vision Alive Through My Actions.” The winners of the annual student essay contest will read their entries. The celebration will also include cultural presentations by the San Jose Multicultural Artists Guild.

The event, sponsored by the Lab’s Work/Life Programs, will be broadcast live on Lab TV channel 2.

BRIEFLY

Westgate Drive entry gate to open earlier

The Safeguards and Security Department, Protective Force Division, remind employees that the vehicle and pedestrian gates at Westgate Drive now open at 5:30 a.m. (previously 6 a.m.).

There is no change to the current closing time of 7 p.m. The Westgate Drive entrance is closed after 7 p.m., Monday-Friday, on weekends and Laboratory holidays. During those times employees needing site access should use the East Avenue entry gates.

New stop signs at Avenue A and 5th Street

The Lab’s Traffic Safety Committee alerts employees of two new stop signs on the block — or more accurately on the corner. Be on the lookout for them on Avenue A, at the intersection with 5th Street.

The new signs are part of traffic control measures supporting the nearly completed extension

of 5th Street to West Perimeter Drive. So play it safe: Stop by and check ‘em out — and be sure you don’t miss ‘em.

January/February issue of *S&TR* online

The January/February 2004 issue of *Science & Technology Review*, the Laboratory’s magazine, is now online at <http://www.llnl.gov/str/JanFeb04/JanFeb04.html>. The lead article, “Small Particle May Answer Large Physics Questions,” features the Livermore-designed experiment to detect the axion—a hypothetical elementary particle believed to constitute dark matter. A research highlight reports on scientists’ first look at plutonium’s phonons.

Another highlight describes how the many rare and endangered species at the Laboratory are actively monitored by wildlife biologists. A final highlight explains why buoys outfitted with radiation detectors could soon play an important role in homeland security.



# NEWS YOU CAN USE

## Real solutions for fitness resolutions



JACQUELINE MCBRIDE/NEWSLINE

LLESA's Body Challenge 2004 is a 12-week, Labwide employee health and fitness incentive program, that runs Feb. 9-April 30. Participants earn points by making healthy lifestyle choices in exercise, nutrition, stress reduction and health issues, and become eligible for prizes, including small exercise equipment, CD Walkmans, massage gift certificates, personal training gift certificates and more.

You can participate individually or join a team in the Directorate Team Competition for teams of five members who can win massage therapy services in their offices. The Body Challenge 2004 is open to all who work on-site. You do not have to be a member of LLESA's Fit for Business Program (FFB). Participants earn points for efforts at home, work or in the community. They also receive support in the form of motivational and educational materials, weekly check in calls (optional), complimentary body fat and blood pressure measurements (optional) and help with workouts in the Fit for Business Program.

You can learn more about the Body Challenge 2004 and get a free chair massage during lunch (11 a.m.-1 p.m.) at the following locations: Wednesday, Jan. 21, West Cafeteria; Wednesday, Jan. 28, South Cafeteria, or get details only by calling 2-9403, 2-7736, or 3-7659. Don't miss this chance to make 2004 the year you begin to enjoy improving your health and fitness.

At left, employees Gordon Lau and Amber Marsh sign up for the program as Cynthia Rose of LLESA looks on.

## Technical Meeting Calendar

Friday  
16

### INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"The Theory and Practice of Measuring Star Formation Rates: Making Honest Men of the Madai Plotters," by Mike Dopita, Australian National University. Noon, Bldg. 319, room 205. Contact: Wil van Breugel, 2-7195, or Josie Morgado, 2-7181.

### INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Monitoring Animal Behavior in the Smart Vivarium," by Serge Belongie, UC San Diego. 2 p.m., Bldg. 451, room 1025 (property protection area). For more information go to <http://www.llnl.gov/casc/calendar.shtml>. Contact: Imola Fodor, (CASC) 4-5420, or Leslie Bills, 3-8927.

Wednesday  
21

### UNIVERSITY RELATIONS PROGRAM

"The Color of Shock Waves in Photonic Crystals," by Evan Reed, MIT. This seminar is part of the two-day interview process for the Lawrence Fellowship. 10 a.m., Bldg. 319, conference room 205. Contact: Rich London, 3-2021, or Brenda Foster, 3-8257.

### INTEGRATED COMPUTING & COMMUNICATIONS MACINTOSH TECHNICAL SEMINAR SERIES

This session of the Macintosh Technical Seminar Series will feature a Macworld wrap up presentation by Apple Computer systems engineer Ron Ustach. Among the items to be covered will be Apple's new G5 Xserve and Xserve RAID- inexpensive 64-bit computing in a 1U space with massive compact storage. Xgrid's utilized by scientists and others working in compute intensive environments to fully utilize all IT resources, including desktops and servers, by creating a grid enabled "virtual" IT environment that takes advantage of unused computing capacity to run batch and workload processing. iLife 04- the creative application suite including iMovie, iDVD, iTunes, iPhoto, and the new GarageBand. 10:30 a.m., Bldg. 543 auditorium. Contact: Duane Straub, 2-9774, or e-mail [straub1@llnl.gov](mailto:straub1@llnl.gov).

Thursday  
22

### PHYSICS & ADVANCED TECHNOLOGIES/N DIVISION

"Flavorful Physics at the Stanford Linear Collider: Heavy Flavor Decays of the Z0 and a Search for Flavor Changing Neutral Currents," by Sean Walston, University of Oregon, Department of Physics. 1:30 p.m., Bldg. 211, room 227, badge required. Contact: Doug Wright, 3-0749, or Pat Smith, 2-0920.

### CHEMISTRY & MATERIALS SCIENCE

"4TI Compton Imaging Using a Single 3-D Position-Sensitive CdZnTe Spectrometer," by applicant Cari Lehner, Michigan University. 10 a.m., Bldg. 151, room 1209. Foreign Nationals may attend if appropriate security plan is on file, which includes Bldg. 151. Contact: Christine Hartmann-Siantar, 2-4619, or Bonnie McGurn, 3-2764.

### INERTIAL CONFINEMENT FUSION/HEDES

"Experiments with Fluid Echoes in a Non-Neutral Plasma," by interviewee Jonathan Yu, UC San Diego, Physics Department. 10:30 a.m., Bldg. 219, conference room 238. Contact: Anika Rodda, 2-6377.

Friday  
23

### CHEMISTRY & MATERIALS SCIENCE

"Spin Resolved Photoemission Spectroscopy for Studying Nonmagnetic Materials," by applicant Sung-Woo Yu. 3:30 p.m., Bldg. 235, Gold Room. Coffee and cookies will be served at 3:20 p.m. Contact: Tom Felter, 2-8012, Rebecca Browning, 2-5500, or Jim Tobin, 2-7247.

### INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"Obscured Galaxy and SMBH Formation," by Chris Carilli, National Radio Astronomy Observatory. Noon, Bldg. 319, room 205. Contact: Wil van Breugel, 2-7195, or Sharon Taberna, 3-6290.

### NATIONAL IGNITION FACILITY

"Process Improvement Methods for World-Class Production Readiness," by Ivan E. Araktingi, Process Quality Engineering Leader, Exotic Electro-Optics, Inc. 10 a.m., Bldg. 482, room 1360 (uncleared). Contact: Andrew Winter, 2-0747, or Adrian Miller, 2-2843.

### INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Type-Based Specialization in a Telescoping Compiler for MATLAB," by Cheryl McCosh, Rice University. 10 a.m., Bldg. 451, room 1025 (property protection area). For more information go to <http://www.llnl.gov/casc/calendar.shtml>. Contact: Bronis de Supinski (CASC), 2-1062, or Leslie Bills, 3-8927.

Tuesday  
27

### RADIATION DETECTION CENTER

"A Prototype Neutron Spectrometer Based on Single Crystal CVD Diamond," by Greg Schmid. 11 a.m., Bldg. 151, room 1209 (uncleared area). Contact: Ron Wurtz, 3-8504, or Christie Shannon, 3-6683.

Friday  
30

### CENTER FOR GLOBAL SECURITY RESEARCH

"Nonproliferation and Regime Change," by Robert S. Litwak, director, Division of International Studies, Woodrow Wilson School. 10 a.m., Bldg. 132 South, Homeland Security Organization, Summit Room 1784. P-cleared attendees welcome. Contact: Tami Alberto, 2-5969.

### INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"HST Ultraviolet Observations of the Central Nebulae in Clusters of Galaxies: Hot News from Cool Cores," by Chris O'Dea, Space Telescope Science Institute. Noon, Bldg. 319, room 205. Contact: Wil van Breugel, 2-7195, or Josie Morgado, 2-7181.

February  
4

### ENERGY & ENVIRONMENT DIRECTORATE

"Postdoc Poster Symposium." E&E postdocs will display posters and discuss their research. All LLNL employees are invited both to attend and to participate in the voting for an award for best poster. 1:30 to 3:30 p.m., Bldg. 543 lobby area. Contact: Camille Vandermeer, 3-2672.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.



AROUND THE LAB



Laboratory’s Harry Briley facilitates community service

By Barry Schrader

NEWSLINE STAFF WRITER

A Lab facilitator and group leader who designs application software for classified applications in Administrative Information Systems (AIS) is being honored by the Alameda County Mental Health Association for his volunteer work as a meeting facilitator the past three years.

Harry Briley will receive the 2003 Achievement Award at a dinner Jan. 29 for his pro-bono work with the Tri-Valley chapter of the Family Alliance for the Mentally Ill, where he has facilitated their monthly meetings and created a resources Website for the group. His wife Anne is also being honored.

His first exposure to facilitating training was when he was matrixed to Human Resources in 1991. He found that facilitating enabled him to be a “positive influence on the Lab and offered a chance to be an agent for change in a positive way.” Briley adds that this has a “strong appeal for people who have an altruistic outlook



Harry Briley

to make the Lab the best it can be.”

He was able to apply his Lab-taught skills to a difficult subject area — mental health crises — with the Family Alliance, enabling parents and family members to think and act proactively instead of being incapacitated by their families’ problems. He is pleased to have been able to use the skills he learned through the Laboratory’s educational programs and

apply them within the community in a volunteer effort.

“I found it a useful tool both within and outside the Lab, as well as across the DOE complex where I have facilitated many multi-Lab meetings over the years,” he said.

Briley encourages others to consider getting involved in facilitating, starting with a class under development at the Lab, then getting mentored by other facilitators. He spent 80 hours in class over six months in 1991, then later in 1996 took an “immersion” class involving 48 hours of intense training over six days at a seminar in Chicago.

For more information about the proposed class, Lab employees can contact Donna Carvalho at 2-9535. Briley also invites Lab managers to take advantage of the facilitators available onsite and employ them in their meetings where the goal is to find a common outcome.

The facilitation spectrum includes non-technical and technical methodology. Such diverse areas as business re-engineering, work flow analysis, project planning, prioritizing, risk analysis and criteria matrices are examples of how facilitation can be useful. He can provide a list of facilitators who fit the task and group at hand at 2-9238.

The Tri-Valley Family Alliance for the Mentally Ill Website created by Briley can be found at <http://brileyh.home.comcast.net/fami/>

The future of physics

Postdoctoral student Jae-Hyun Park, left, discusses her poster “Phase Diagram Reinvestigation of Pure Methane at High Pressure-High Temperature” to Jeffrey Grossman and Erik Draeger and PAT’s Principal Deputy Associate Director Tammy Jernigan. The poster session was just one part of the Physics and Advanced Technologies Directorate’s first Posdoc Symposium held on Jan. 8.



JACQUELINE MCBRIDE/NEWSLINE

UC

Continued from page 1

the national laboratories, to respond to requests by DOE for an expression of interest and a statement of qualifications on behalf of UC, and to acquire professional assistance in drafting potential bid documents and in the preparation for possible competition.

Competition preparation activities and the costs associated with these activities would not obligate the University to bid. UC would not use funds from its general account or state funds, and the costs therefore would not have an impact on UC’s state budget situation.

“The Regents’ decision today allows us to move forward and continue to prepare for a competition without obligating the university to compete,” said Robert Foley, UC vice president for laboratory management. “This action

ensures that UC is in the best position to participate in a competition should the Regents make a decision to do so.”

Foley told Regents that UC officials are in discussions with industrial partners that would like to team with the university to strengthen business and operations at the Los Alamos and Lawrence Livermore national laboratories.

“While the Regents would remain the prime contractor, our joining with industrial partners would allow us to strengthen effective management practices in managing the national laboratories,” he said. “The potential partners with whom we are having discussions would bring a set of innovative and unique qualifications that would bolster the University of California’s management of the national labs, now and in the future.

“In pursuing their missions, the three laboratories are major sources of scientific and

technical strength for the nation in fields ranging from national and homeland security to basic physics, biotechnology, climate studies, supercomputational capability development, materials science, energy and the environment. As a consequence of their work, the laboratories occasionally enter into research partnerships with industry, which contributes to our country’s economic well-being. The laboratories also are called on to lend some of its personnel and expertise to engage in mathematics and science education for students and teachers, primarily in their communities.”

The Lawrence Livermore and Los Alamos national laboratories each employ more than 8,000 UC staff and have combined annual operating budgets exceeding \$3.5 billion, while Lawrence Berkeley Lab has approximately 4,000 employees and an annual budget of nearly \$500 million.



# CLASSIFIED ADS

See complete classified ad listings at  
<https://www-ais.llnl.gov/newsline/ads/>

**AUTOMOBILES**

1998 - Acura Integra: A/C, allpower: steering, windows, doorlocks; tilt-wheel; AM/FM-Stereo-CD,Dual-Front-Air-Bags; 60K miles; \$8000/OBO. 510-727-0373

1998 - Mercedes C-280 Excellent Condition 73K miles, all records, \$18,500 925-240-6936

1998 - Honda Civic EX, 4dr, 5spd, AC, sunrf, white, great gas mileage, mint condition, 77K miles \$8,200. 707-455-7963

1989 - Camaro RS, 2-dr, automatic, clean, runs great. \$3,000.00 OBO 925-371-1705

1998 - Volvo S70 T5 Turbo limited addition auto trans. 68,000 miles, \$13,000 510-490-6073

2003 - Toyota Camry Sedan 4 Door 19k miles - 4 cyl, automatic. EXCELLENT condition. Graphite Gray. \$17,000 ñ original owner. 209-629-4983

1957 - 57 chevy 2 door Belair rust free, good running 350 and rebuilt turbo 350, lots of extras, 6,000.00 obo. project car. 925-447-8744

1994 - Q45 Infiniti all leather/wood interior Bose stereo 10 cd changer sunroof 122,000 freeway miles excellent condition new front tires \$5200 415-309-1384

1965 - Karmen Ghia \$300. Great for parts or project car. 925-550-3809

1993 - Subaru Legacy. White, 4 dr, air, pwr dr locks, pwr windows. All maintenance records. 120k mi. Good condition. Great school or work car. 209-825-5687

1986 - Honda CRX. 5 sp. New clutch. Recent batery, major electrical tune up. \$1200 209-957-3289

1991 - Toyota Previa van SE good reliable transportation. CD Radio,4 Captain chairs. \$2500 or best offer. 209-918-4053 or 209-545-3896

1993 - Mercury Villager mini van, white, 99,500 miles. Runs and looks good. \$4,500 or B.O. 209-982-9102

1999 - Lexus SC300, Excellent Condition, Black/Black, Fully Loaded, 53K. \$21,500 209-952-7186

1995 - Olds in execllent condition. Auto, A/C, Pwr wind, brk,stir, radio.many things.\$2500. Eve 925-625-2124

1991 - Chevy 20 Van Conversion, low 100K miles. Plush interior with AC/AT/TV/VCR/tinted windows. Great condition. \$5000 OBO. 925-455-1719

1998 - Pontiac Grand Prix SE Sedan, Black Ext, V6, Auto Trans, AM/FM Stereo w/CD, Alarm, Excellent Condition, 105K, \$7,000/OBO 925-469-0107

1986 - Saab 9000 Turbo 4 Doors/Maroon, Manuel trans., recently replaced alternator, fuel filter and throttle cable Asking \$1800.00 call 209-545-5849

**AUTOMOBILE ACCESSORIES**

Dash mat for 99-04 full size chevy truck. Brand new, black. Got 2 for Christmas only have 1 truck. \$35 OBO 925-449-0982

Heads Ford 289/302/351 Big valve, ported, polished, decked, magnafluxed, new valve guides, w/three angle grind. \$250. 209-825-0326

Honda- 14 inch rims w/tires and hubcaps, 4 lug, Steel OEM wheels. Off of 1998 Civic EX. \$100 b/o. 209-832-8515

Toyota- 16 inch rims w/tires, 6 lug, aluminum alloy. Off of 2002 Sequoia SR5. \$400 b/o. 209-832-8515

**BICYCLES**

20 inch Mongoose bike \$20 925-455-4896

**CAMERAS**

Antique camera equipment: Kodak Color Burst-100 camera, Kodak Scope Eight-33 movie projector, Irwin Zehpfier camera & projector. \$150. takes all. 925-447-6682

**ELECTRONIC EQUIPMENT**

Apple 21 inch Studio Display, Blue & White case, 4.5 years old, heavy CRT, still works. \$100 925-634-3371

IBM Thinkpad laptop iSeries - Celeron 500MHz, 6GB memory, 96MB RAM, 56k bps modem, CD, 800x600 LCD monitor \$250 925-600-8079

Sonance powered Subwoofer 21 in \$50 925-455-4896

27 in. Sony Trinitron TV. 9 yrs old but in excellent shape. \$40 925-456-8120

**GIVEAWAY**

Complete Front Rotor & Brake assembly for 1993 Ford Excort in good cond. (probably fits other years) 925-634-8523

Whirlpool clothes washer, 7 yrs old, washes clothes well but sometimes requires lid open/close to activate spin cycle. 925-454-8827

GE fluorescent bulb for Torchiere floor lamp, #5520, 55W, brand new. (The lamp for which it was purchased had other problems) 925-443-1279

One double bed headboard w/frame. Used but still in decent shape. Twin day bed with trundle bed, used but in excellent condition. Both Free!!! 209-847-8264

Moving Boxes All Sizes - Free - U-haul 925-454-1663

**HOUSEHOLD**

Emerson microwave. Hardly used. Have too many. Good price, 25.00. Small Kitchen TV. Good picture. 10.00. Hand painted diningroom light. 15.00. 510-537-7222

FILING CABINET - 4 drawer, steel, black. \$50 or best offer. 925-449-4003

Bed, full size, brass headboard with porcelain, new bedding (paid \$200+ just for bedding). \$150.00 OBO or trade for queen size bed. 925-606-0722

Formal glass dining table \$350 925-449-1481

Refrigerator,KitchenAid,21 cuft,almond,top freezer,like new,\$445. Washer/dryer,KitchenAid,electric,almond,H D,like new,\$150. 925-634-7573

Murphy Hide-A-Bed (folds against the wall, mounts to the floor) frame, mechanism, Queen size mattress and box spring. \$250.00 OBO 925-634-8523

Lennox Canterbury Crossing Spice Rack. 24 pcs great condition. \$250 209-527-7959

Rkadia Home Entertainment Center: solid alderwood, lighted, floating bridge & upper curio. Mission style hardware. 10 ft x 7 ft tall. 1-yr. old. 209-835-8241

TWO matched antique handcrafted walnut lamp table nightstands with drawer, from Tot Green estate. \$300 for pair. 925-449-7888

ANTIQUE mahogany Secretary desk in excellent condition, \$1,000 firm. Victorian side chair, needs restoring, \$50. 925-449-7888

Twin bed bookcase headboard with frame and mattress. \$50 firm. Solid Oak roll top desk. Winners Only, Excellent cond. \$500 firm. 925-516-8339

Baby crib, mattress pad, mattress, and changing table. Not a scratch. paid \$600 sell for \$200 firm. Solid maple 925-516-8339

Solid Oak crib with matress and matching oak changing table. Excellent quality and condition! \$450 b.o. Call 240-0446 after 4pm

Futon, queen size, firm mattress, excellant condition, \$200.00. 925-606-0722

Bedroom set \$150 or make offer. Includes head board, dresser with mirror, another dresser, a TV stand and two night stands. Dark wood. 925-846-2903

Couch and extra pillows. Floral pattern. Smooth texture. Like new. Not too heavy. New \$900. Yours for \$200. 925-443-6531

Moving Sale. Sofa/Loveseat,blue/mauve, \$175.00. Square glass table w/4 chairs, pas-

tel color, \$150.00. Oak coffee table \$100.00. 925-449-7371

Oak kitchen table \$50. Oak twin headboard \$15. Folding picnic table \$10. 925-455-4896

DINING ROOM TABLE - solid oak, 40 x 54 with 18 in. leaf. Medium oak color. \$200 or best offer. 925-449-4003

Trundle bed, wood frame. Exc. condition. Mattresses not included. \$150 OBO. 925-456-8120

Beautiful solid oak dining room set w/6 chairs & matching lighted china cabinet. Table expands to 8-1/2 ft., asking \$650.00 or BO. 925-455-4041

Queen size custom headboard with glass panels and lighting.Side storage- like new condition. \$200.00 OBO 925-443-3259

Refrigerator, Whirlpool 19.2 CF, white with icemaker, 12 yrs old, good cond., \$200. 925-245-1073

Whole house window fan, AirKing 20 in., 3 speed, fits 27-38 in. wide window, used 1 summer, works great. Paid \$250, ask \$150. 925-245-1073

**LOST & FOUND**

LOST-Ladies watch. Lost-wk before Thanksgiving in B132S parking-lot.Brushed silver with gold-tone highlights, small round face. Sentimental value. 925-373-8414

FOUND: Lab Service Pin. Identify the pin and it is yours. Please call 4-5482.

**MISCELLANEOUS**

Solid Oak rolling computer desk/cart, pull-out keyboard and printer trays. \$80. 925-294-9022

Student Drafting/Architect table, 30 inch wide X 48 inch long, adjustable leg height, great condition, \$35 925-229-2240

BOOKS on movies; also collection of 1950s sci-fi magazines. Sale Saturday, Jan. 24, 10 am to 2 pm at 309 North L Street, Livermore. 000-000-0000

Avent baby bottle system. Complete set from newborn to toddler, with sterilizer. Also includes Avent juice cups with leak-proof tops. \$40. 925-454-8827

Older Bobcat needs work. 500.00 OBO. 925-447-8744

Hay Barn \$500 you take down/haul, \$1,000 we take down/haul. Must take by 1/25. Saddles/Tack for sale. Call for pictures/details. 925-550-0831

**MOTORCYCLES**

1981 - Kawasaki 440 twin 23K miles, orig. owner, garaged, no dents, 65mpg at 65mph, smooth light cruiser, comfy seat, tach, center stand, \$800. 925-443-6531

1998 - Suzuki TL1000R Yellow/Black 7500 miles. Very motivated seller. \$6000 OBO. Always garaged, never down. Many extras, call/email for info and pictures. 209-575-2705

**MUSIC INSTRUMENTS**

PIANO - Winters Company spinette w/bench. Good condition, dark finish, needs tuning. \$600 you pick up. 925-828-0318 or 925-447-4804

Older upright piano. Good tone. Dark oak finish. \$300 OBO 925-455-4550

**PETS & SUPPLIES**

Free to the right home. Six year old Australian Shepard. Needs more attention and room. Outdoor dog. 925-449-1324

150 Gallon salt-water aquarium show tank, custom oak stand, coral, misc. supplies, and pump included. Excellent condition, \$800.00/BO 925-516-8925

German Shorthair pups whelped 11/24/03. Excellent bloodlines \$275. 209-835-6912

Dog runs, two 10x10x6. Configurable to two runs, or one big run (8 10/6 panels, two w/ gates). Also kennel/crate for large dog.

BO. 925-447-8582

Adorable chocolate Lab puppies. Six weeks old. \$150.00. 209-858-2419

**RECREATION EQUIPMENT**

151 Burton Snowboard with bindings. All mountain board, tuned up and ready \$225. Northwave Snowboard boots Wms-10 - \$100. Evenings 6-8PM. 209-839-8102

Airwalk snowboard boots mens size 9. Used three times. Excellent condition. \$80. 925-600-1817

Exercise equipment: bench, overhead support, weights, bars, leg-lift and pull-down fixtures, quick-release clips, spotting pins. \$250 OBO 925-443-7252

Sears Treadmill ProForm T35 power incline \$150 925-455-4896

concept 11 rower,model b.hardwood footboards & handle,digital readout,good cond. fun workout!\$250 925-455-6309

Custom-made Dagger whitewater kayak paddle. 78 inches long, feathered blades, oval shaft. \$300 firm. 925-455-5655

**RIDESHARING**

Express your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsmp>

Orinda - Lamorinda carpool seeks 4th rider/driver. Lab hours 8-4:45. Carpool meets near St. Stephens and Hghwy 24. 925-253-0498, ext. 2-9823

Modesto - Working 4 10 hr. days?Vanpool Mon.-Fri. Leaves 6 a.m. and returns at approx. 5 p.m. 209-667-2365, ext. 2-8321

Patterson - Vanpool has seats available for 7:30-4:00 shift. Pre-tax transportation & Guaranteed Ride Home Programs available. 209-892-2118, ext. 2-9502

Manteca - 9/80s alternate work schedule. Rider driver needed. Very flexible. Meet at Walmart. 7am to 5pm. 209-825-0326, ext. 3-0631

**SERVICES**

Expert painting and related services. Sheetrock,taping and texturing,tile and stone work. Free estimates, large and small jobs. 925-487-6643

TUTORING in high school and college math and chemistry. 925-443-2095

Hauling Service. Estate clean outs, garage, attics, shed & Barns, misc. 925-373-9540

Drywall by Enrique. No job too big or small. 925-980-1302

DAYCARE for 0-5 yrs in Livermore. Warm, loving, fun environment. 15+ yrs in business becuase I LOVE KIDS! Immediate opening. References Available. 925-373-9428

Expert painting and related services. Journymen painter, free estimates, Interior and exterior. 925-487-6643

SUPPORT GROUP for BETTER RELATIONSHIPS-personal/business! Codependents Anonymous (CoDA) Meets Tuesdays Noon T3520/R1174 Just come or call for Info 925-447-7070

**SHARED HOUSING**

Livermore - Single parent w/2 daughters has room avail for rent. Lrge Mstr BR/Bath, full priv. Safe & friendly. \$600/mo includes util. Female pref. 925-606-0260

Livermore - - Immaculate 2 bed-room w/1 bath apartment. Hookup for washer/dryer, 1 car garage, available in March. 925-443-2383

Livermore - Room for rent, male to share with same. Close to labs, bedroom w/own bath, kitchen/laundry privileges. NO SMOKING/PETS. \$600 includes utilities. 925-443-3066

Livermore - Nice room for rent near Lab. \$500/month plus share utilities plus deposit. No smoking, pets, or stereo. 925-455-6044

**TRUCKS & TRAILERS**

1996 - Toyota Tacoma, V6, 4x4, aluminum cap w/rack, nerf bars, 54K miles, \$8600 925-447-5194

1994 - Full size 4x4 2 door chevy blazer, 5.7 liter, a/c, ps, pdll, ps, pw, rear hitch. VERY CLEAN, \$9000.00 925-672-3482

1999 - GMC Sonoma Extended Cab Pickup w/3dr door, HO 4.3L V6, Auto, air, P/S, Cruise, AM/FM Disc, Shell & Bed Liner, 66K miles \$8995.00 OBO 925-634-8523

1999 - set of 1999 ford S.D 4x4 wheels and tires. premium alloy wheels, 15000 miles on tires. lugs and center caps included. 400.00 size- 285/16 209-543-0722

1974 - Chevy short wheelbase, step side pickup bed. Minor dings and needs new floor, otherwise complete. \$200 obo. 925-449-1324

2003 - Toyota Tundra Acc Cab, 4WD, v-8, AT, loaded, TRD off-road, much more. 4500 miles. 4-3012. KBB is \$32,500. Price is \$28000. 775-783-8137

Truck Bed Toolbox. Steel Construction. 63 inches wide (Toyota, Ranger, Nissan, etc) Needs new gas springs. \$100 925-828-9174

1990 - Dodge W250LE 4x4 5 Speed Cummins Diesel 113 k miles, Original Owner, Very good condition, Xtras, Must See \$11,000.00 925-443-5193

1984 - Ford F250 XLT, 8600GVVW, Frozen 460 engine, 133K, excelent otherwise in and out, shell, fully loaded, \$2300/bo, 925-833-6076

2001 - 30i Fifth wheel, Cardinal. Two slide-outs, TV, 16i Aluminum wheels, Aluminum frame, Fiberglass sides, AC and many other options. Like new. \$27,000 209-838-7058

2000 - Chevy Extreme Red with all the trimmings.AM/FM radio with CD. Looks and runs good. Asking \$9000 below blue book. 209-918-4053 209-545-3896

1978 - Datsun 4X4 33x12.5x15 mud tires. This is a serious mud toy. Engine runs strong. Call after 5pm. \$1,500 or B.O. You smog. 209-239-9523

1952 - GMC Pick up. Complete, needs restoration. 209-825-0326

1999 - For F150 XLT Super Cab w/stepside body & full power opions. Sharp truck with only \$66K miles. Price \$15,900 Call 209-599-3285

**VACATION RENTALS**

Plenty of snow in great mountain cabin near Arnold on Hwy 4. Near Bear Valley Ski Resort. 4 bedr, 2 bath. Wood burning stove. 925-245-1114

Soooo cute beach cottage in Santa Cruz. 4 blks from ocean. 2 bedr, 2 bath. Fully equipped kitchen, spa 925-245-1114

SOUTH LAKE TAHOE - 3 Bedroom 2 bath Chalet, nicely furnished, all amenities, close to all skiing, RESERVE NOW for OPENINGS! 209-599-4644

Hawaii, Oahu, On a white - sandy beach. 1 bedroom, sleeps 4, openings avail. July and August. most weeks \$795. 925-449-6048

**WANTED**

Want electric treadmill in excellent condition, fold-up. Will pay \$200. 925-443-3102

Tracy Adult Soccer League is currently holding registration for the Spring Season. Full teams or individual players welcome 209-836-0577

Wanted: Trees, shrubs, flowers for landscaping old country farm and home. Will dig-up, clean-up, and haul away. 925-447-0351

**Please note:**

Services and merchandise listed in *Newsline* are not guaranteed. It is up to the buyer to scrutinize services purchased.

Due to space limitations, *Newsline* may withhold ads that have already run. They will still appear on the Web.

# AROUND THE LAB



## AWARDS

Continued from page 1

cess in reducing LLNL fleet and commuter fuel operating costs by an estimated \$1.4 million annually. Reductions come from extensive employee use of car and vanpools, public transportation and bicycles on site.

Pendleton said: “We’re honored to have been chosen for these awards and we hope this recognition will serve to encourage more employees to take advantage of the transportation program.”

She credits TSMP administrator Beverlee Morales with the success of the program designed to develop effective methods to reduce traffic-related air quality and congestion management problems at the Livermore and Tracy sites, and in the surrounding communities.

An important part of TSMP’s activities is keeping employees informed about convenient and cost-effective commuting alternatives such as buses, carpools, and vanpools. Another related mission is educating employees and the public about the hazards of air pollution.

For more information, check the Web: <http://www-r.llnl.gov/tsmp/>



JACQUELINE MCBRIDE/NEWSLINE

**From left to right: Mishell Pendleton, superintendent of Fleet Management, and Beverlee Morales, Transportation Systems Management Program administrator, with some transportation options offered by the Laboratory. TSMP efforts to promote commuter alternatives has earned two federal energy awards.**

## INCOME

Continued from page 1

products based on the Lab’s intellectual property and licensed by LLNL’s Industrial Partnership and Commercialization Office (IPAC).

The bulk of the net proceeds are plowed back into the Lab’s R&D, technology transfer and education programs, with most of the remainder going to the inventors and a typically smaller amount covering some administrative costs.

Karena McKinley, IPAC’s director, said Livermore’s technology transfer program has three primary goals.

“One is to help achieve our mission goals in programs such as homeland security, where commercial products play a key role,” she said. “A second is to allow companies to capitalize on advances from our programs and commercialize products that contribute to our economy and quality of life.

“And the third goal is to help promote our science and technology objectives. Licensing income provides something of a surrogate measure of our effectiveness in these objectives, so we’re really excited about this growth.”

McKinley said Livermore’s royalty income has grown at a rate of 15 percent to 20 percent a year since licensing in its present form began at the Lab — from \$400,000 in 1992 to about \$4.1 million last year. “Royalties are a source of relatively flexible funds for research,” McKinley said. “If our historical growth rate continues, these funds will become increasingly important in a time of tight discretionary resources.”

Along with licensing fees and royalties from the sale of products, the Lab also

receives income from the private sector for sponsored research, and it participates in DOE- and industry-funded Cooperative Research and Development Agreements, or CRADAs, with a variety of commercial partners.

“It’s important to note,” McKinley said, “that last year’s record licensing income included \$2.4 million in what we call ‘earned’ royalties — income derived from the actual sale of products, as opposed to licensing fees. That’s more than twice the amount earned by any other DOE lab, and it signifies the extent to which LLNL technologies are actually being put to use to improve the quality of people’s lives.”

One LLNL technology developed in the 1980s, a method of fluorescently “painting” chromosomes to make it easier to spot genetic abnormalities in a single cell, was among the University of California’s top 20 revenue-generating inventions in 2002. Licensed exclusively to Vysis, Inc., a company specializing in DNA-based clinical products for the evaluation and management of cancer, prenatal disorders and other genetic diseases, the technology was LLNL’s top generator of earned royalties last year.

Two other Livermore technologies — PCR micro-reaction chamber technology and micropower impulse radar (MIR) — were also among the top-20-earning inventions among the University’s campuses and labs last year.

Cepheid, a diagnostics instrumentation company in Sunnyvale, obtained a license in 1997 to use Livermore’s sleeve reaction chamber designs for monitoring chemical reactions. The technology is the basis of Cepheid’s Smart Cycler® and GeneXpert® systems, which are being used by

the U.S. Postal Service in fast-turnaround DNA analysis equipment designed to detect anthrax in mail, as well as in a wide variety of medical and research applications.

Cepheid’s work in biothreat detection technology has earned the company several awards in recent months, including membership in the “Scientific American 50” list of outstanding technology leaders of 2003 and a “Best of Small Tech Products” award from *Small Times Magazine*.

Livermore’s MIR technology, a spin-off from advanced digitizer work for the Lab’s Nova laser, has been successfully commercialized by Switzerland’s Endress+Hauser, among others. MIR-based products are used by the food, chemical, and other industries to measure the levels of bulk solid materials such as cement, grain, and plastic powders and for other industrial and consumer applications.

McKinley noted that during the past five years, the Lab’s researchers have disclosed nearly 900 new inventions — nearly one every business day — filed more than 500 patent applications, and had more than 400 patents granted by the U.S. Patent and Trademark Office.

Many of these technologies, ranging from environmental cleanup to improved aircraft safety and medical and homeland security applications, have been commercialized and are contributing to the U.S. economy and providing other public benefits. More than one-fourth of LLNL’s licenses are with California companies, and many of the Lab’s licensees have set up shop in nearby communities or elsewhere in the Bay Area, where they are contributing to the well-being of the area’s economy.



# Vernal pools reflect seasonal changes

The new year is a time of renewal when we take a moment to reflect on our lives and make resolutions to change our ways. In California, the new year is also a time of renewal in nature. Nothing better exemplifies this than the rebirth of vernal pools in the rolling grasslands in the Tri-Valley and Central Valley. Not many people notice temporary wetlands, but these little oases play an extremely important role in Californian grasslands, providing water, habitat and food for many wildlife species.

Vernal pools are a type of temporary wetland that was once common but now is quite rare due to large-scale alteration of lands for agriculture and development. ‘Vernal’ means spring in Latin, and vernal pools are so named because of the amazing growth of flowers along the drying edge of the pools in the spring.

Despite the name, winter marks the actual beginning of the life cycle of vernal pools, as winter rains fill depressions. During the winter, vernal pools may look like nothing more than a big puddle, but they are already teaming with life. Both the California red-legged frog and California tiger salamander use temporary wetlands to breed in the early spring. In addition to our amphibian friends, there is a cornucopia of wildlife species waiting to “spring to life” when the vernal pools begin to fill with water.

Among these are the vernal pool tadpole shrimp and fairy shrimps (which resemble “sea monkeys” or the brine shrimp you had as a kid). These shrimp survive the dry phase of the pool



By Jennifer Garrison

sealed into tiny living time capsules called ‘cysts’ (which are really shrimp eggs with a special coating). The cysts hatch when they are submersed in water, and the baby shrimp grow to maturity in a few weeks to two months. The mature shrimps mate and produce new cysts, which can remain dormant for years. Because their unique habitats have become so rare, vernal pool tadpole shrimp and several species of

fairy shrimp are classified as federally endangered under the Endangered Species Act. Other common residents of vernal pools include beetle and dragonfly larvae, western spadefoot toads, and pacific tree frogs. Bobcats, coyotes, badgers, herons and egrets also visit the pools to drink water and to snack on the tasty critters living there.

As the pools dry and the animals depart, flowers bloom in concentric rings around the pool. Colors range from white to bright yellow to hot pink and purple. These vernal pool plants, many of which are found nowhere else in the world, have wonderful descriptive names, such as palmate-bracted bird’s beak, little mousetail, calicoflower, monkey flower, and woolly marbles. All vernal pool plants are short-lived, and grow, flower, and put out seed while there is still moisture around the pool. The seeds will then wait patiently for the rains to begin, to start the whole process again.

By the time the vernal pool has completely dried up in the summer, there is little sign to the casual observer of the plethora of life found there only a few months prior. The moral of the story is that sometimes first impressions can be deceiving — something that appears to be a plain brown field in the heat of summer can transform into something very special in the winter and spring. This winter see if you can find a vernal pool. Then remember where it is, go back to visit it as the seasons progress, and see what changes time brings.

*Jennifer Garrison is an ecologist and wildlife biologist in EPD.*



PHOTO © 1981 DR. OREN D. POLLAK

A typical vernal pool in the spring. Notice plant species change as you move away from the wetter center. The purple in the center of the photo is not water; it comes from thousands of purple flowers.



PHOTOS BY DAVID ROSEN, WILDSIDE PHOTOGRAPHY; PROVIDED BY SACRAMENTO SPLASH

The three phases of the vernal pool life cycle. There are many vernal pools in the Livermore Area, especially in North Livermore in the Springtown area.

## New Central Cafe prepares to open its doors

By early February the first meals will have been served at the new 16, 000 square foot Central Café, Bldg. 471, located adjacent to the retention basin on Inner Loop Road.

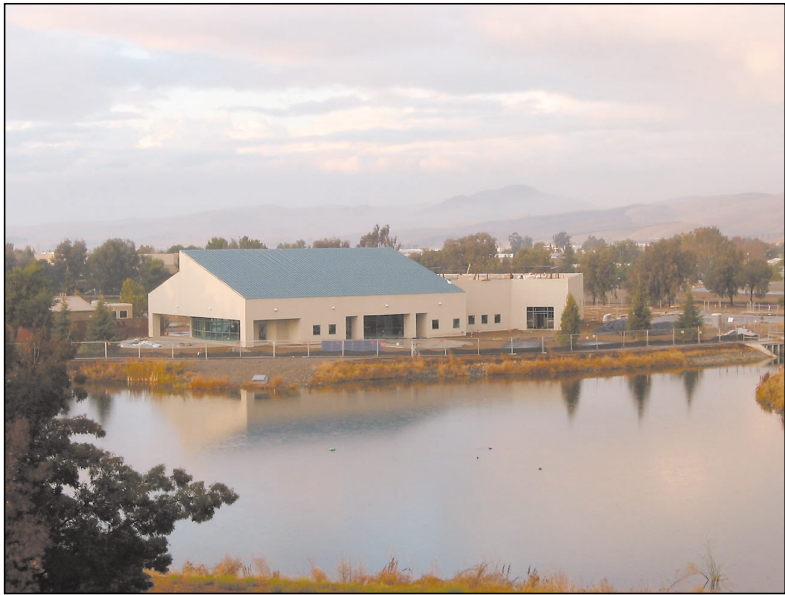
Project Manager Barbara Pulliam says W. E. Lyons Construction reports that the new café is 98 percent complete and furnishings began entering the building last week.

Stu Jossey, Business Services Department's Employee Services division leader, says: “We expect to open the doors and have a limited menu available to employees on Monday Feb. 2.”

A grand opening with a wide variety of food options will take place later in February.

Food Services Group Leader Michelle Quick noted that in order to make the transition to full operation at the new Central Cafe, the old Central Cafe — re-named the Hard Hat Café — will close Friday Jan. 16, at 1:30 p.m. Eures Dining Services needs approximately two weeks to stock the new facility, sanitize and test equipment, and train employees.

Java Wave will remain open with full service at the Hard Hat Café through Friday Jan. 23. Java Wave will start selling coffee beverages at 7 a.m. and pre-made sandwiches and salads from 11 a.m. to 1 p.m.



STU JOSSEY



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